IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No. 10/693,396
Filing Date 10/24/2004
Confirmation No. 2522
Inventorship ..... Snover et al.
Assignee ..... Microsoft Corporation
Group Art Unit 2192
Examiner ..... Chrystine Pham
Attorney's Docket No. MS1-1740US
Title: ..... Mechanism for Obtaining and Applying Constraints to Constructs within an Interactive Environment

DECLARATION UNDER 37 C.F.R. § 1.131

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I am an inventor of the subject matter which is claimed and for which a patent is sought in the application entitled "Mechanism for Obtaining and Applying Constraints to Constructs within an Interactive Environment," as identified above.

We conceived of the invention(s) recited in the pending claims of the subject patent application in the United States prior to the February 3, 2003 filing date of U.S. Publication No. US2004/0153995 to Polonovski *et al.* (hereinafter, "Polonovski").

Attached to this declaration is evidence documenting that the invention was conceived prior to February 3, 2003, which predates the filing date of the Polonovski. In particular, attached hereto as Exhibit A is a redacted copy of confidential documentation created prior to February 3, 2003, documenting the systems and methods disclosed in the above-referenced patent application. Non-essential portions of Exhibit A have been redacted. Although the actual date(s)

have been redacted from the documentation provided as Exhibit A, I declare that the actual date(s) of creation of this documentation was prior to February 3, 2003.

All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patent issued therefrom.

* * * * * * * * *

Full name of inventor:	Jeffrey P. Snover
Inventor's Signature	Jeffrey P Snover Date: 3/13/07
Residence:	Woodinville, WA
Citizenship:	USA
Post Office Address:	c/o Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

* * * * * * * * * *

Full name of inventor: James W. Truher III

Inventor's Signature _____ Date: 3/13/07

Residence: Bellevue, WA

Citizenship: USA

Post Office Address: c/o Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

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Full name of inventor: Kaushik Pushpavanam

Inventor's Signature _____ Date: _____

Residence: Sammamish, WA

Citizenship: India

Post Office Address: c/o Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

* * * * * * * * * *

Full name of inventor: Subramanian Viswanathan

Inventor's Signature _____ Date: _____

Residence: Redmond, WA

Citizenship: USA

Post Office Address: c/o Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

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Inventor's Signature	_____ Date: _____
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Full name of inventor: Kaushik Pushpavanam

Inventor's Signature P. Kaushik Date: MAR 13, 2007

Residence: Sammamish, WA

Citizenship: India

Post Office Address: c/o Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

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Inventor's Signature _____ Date: _____

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Full name of inventor: Subramanian Viswanathan

Inventor's Signature _____ Date: Mar. 14, 2007

Residence: Redmond, WA

Citizenship: USA

Post Office Address: c/o Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

Exhibit A

Microsoft Patent Pre-disclosure Document

Title of Invention: Application of Attribution and Metadata to Command-line use

[redacted]

Introduction:

[redacted]

This invention allows for the application of attribution to an interactive command-line usage pattern. The issues addressed by this invention are as follows: While many *compiled* languages allow for attribution of variables, functions, classes etc, there is no existing mechanism for utilizing these constructs in an interactive environment. The Monad parser allows for the use of metadata from within an interactive environment Attributions indicate behavior about the object that result in less code being written. Also, attributions may be used to reduce the amount of code that would be written by a developer or administrator and thus, will become integral to command-line usage.

[redacted]

Description of the Invention:

[redacted]

When a user types a command at the command-line, the interpreter first determines whether there is any attribution associated with the command-line by looking at the first token. If the token starts with a "[" and ends with a "]", that token is an attribution token. Multiple attribution tokens may be associated with a non-attribution token. After an attribution token has (or set of tokens have) been discovered, it must be applied to the next non-attribution token.

[Integer][ValidationRange(3,5)] $a = 4

The line above has two attribution tokens; the first token indicates that the variable will be of type Integer. The second attribution indicates that the value of the variable $a must be between 3 and 5 inclusive. This attribution ensures that if $a is assigned in a subsequent command, it will be checked against the two constraints. Thus, the following would result in an error:

$a = 231
$a = "apple"
$a = $(get/location)

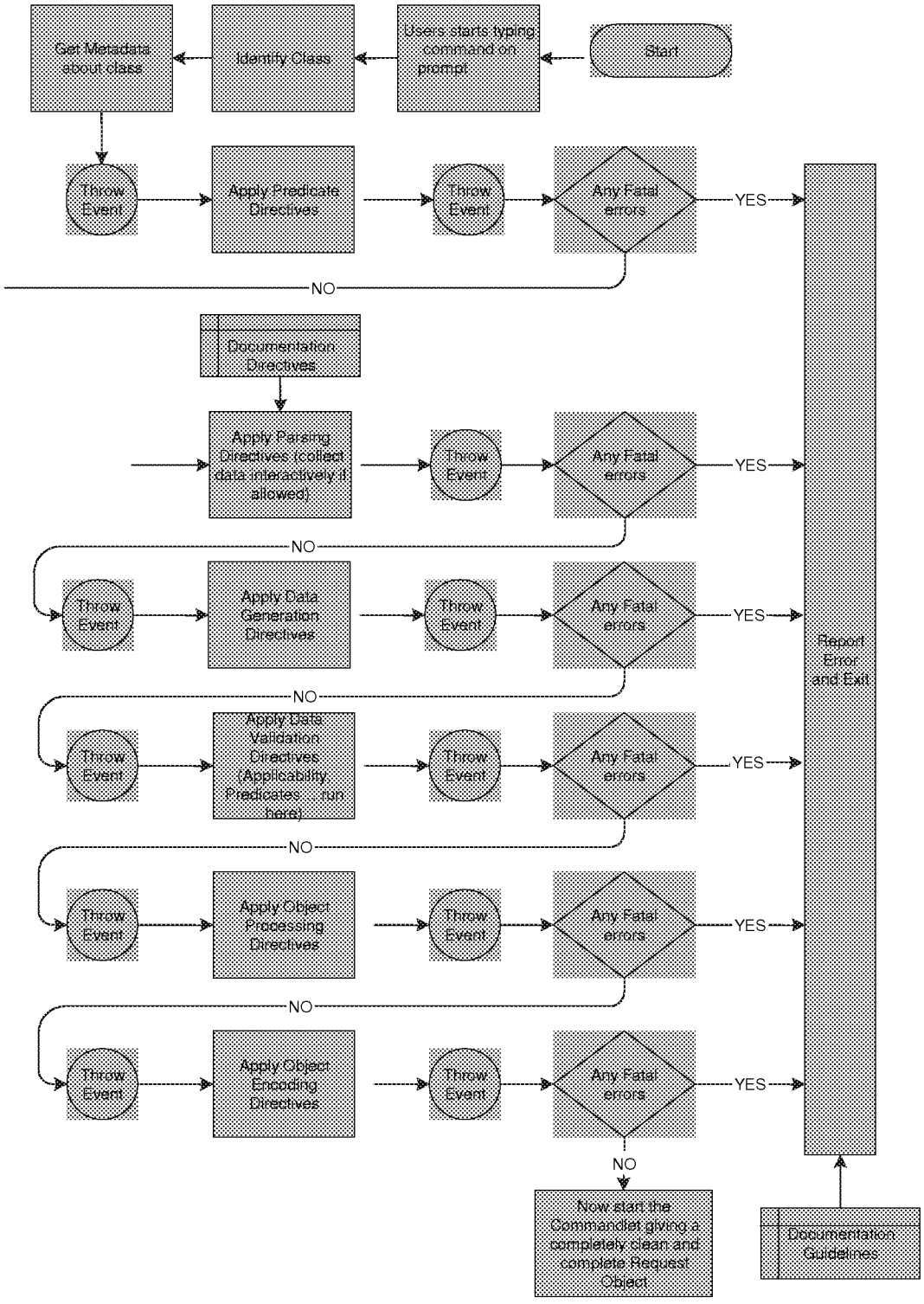
The list of possible attributions is not fixed, but is extendable.

Diagrams and Flow Charts:

Exhibit A

[redacted]

Exhibit A


Start
User's starts typing command on prompt
Identify Class
Get Metadata about class
Throw Event
Apply Predicate Directives
Throw Event
Any Fatal errors
YES
NO
Documentation Directives
Apply Parsing Directives (collect data interactively if allowed)
Throw Event
Any Fatal errors
YES
NO
Throw Event
Apply Data Generation Directives
Throw Event
Any Fatal errors
YES
NO
Throw Event
Apply Data Validation Directives (Applicability Predicates ... run here)
Throw Event
Any Fatal errors
YES
NO
Throw Event
Apply Object Processing Directives
Throw Event
Any Fatal errors
YES
NO
Throw Event
Apply Object Encoding Directives
Throw Event
Any Fatal errors
YES
NO
Now start the Commandlet giving a completely clean and complete Request Object
Report Error and Exit
Documentation Guidelines

[redacted]